

Having thus described the preferred embodiment, the invention is now claimed to be:

1. An image guided surgery system comprising:
a low cost integrated computer;
software-integrated disposable kits including:
a digital medium with application-specific software; and,
5 instrumented disposable surgical tools;
a tracking system which locates the surgical tools while in use; and
10 a display used in conjunction with the computer.
2. The image guided surgery system as set forth in claim 1 wherein the low cost integrated computer includes:
a portion of image guided surgery software that 5 provides minimal user functionality, full user functionality being enabled by the application specific software obtained from the digital medium of the software-integrated disposable kit.
3. The image guided surgery system as set forth in claim 1 further including:
a low cost mobile cart that holds at least the computer, display, and standard peripherals.
4. The image guided surgery system as set forth in claim 1 wherein the computer includes:
a drive which receives and reads the digital medium.

5. The image guided surgery system as set forth in claim 1 further including:

a means for deactivating or encrypting the digital medium against reuse at the end of a surgical
5 procedure.

6. The image guided surgery system as set forth in claim 1 wherein the computer includes:

an input/output interface for capturing still-images and/or live video from an imaging device;

5 a graphic input/output interface for connecting to the display;

an interface for interconnection with at least one of a wired user input device and a wireless user input; and,

10 an interface for interconnection with tracking sensors for monitoring position and movement of the instrumented surgical tools.

7. The image guided surgery system as set forth in claim 1 wherein the software-integrated disposable kit further includes:

5 a label to identify a particular surgical procedure to be performed using the kit;

sterile packaging in which the instrumented disposable surgical tools are contained in sterile condition;

10 other accessories in sterile condition in sterile packaging;

user input devices; and

wherein the digital medium is a disposable one-time use digital medium readable by the computer and contains a portion of image guided surgery software specific to the particular surgical procedure.
15

8. The image guided surgery system as set forth in claim 9 wherein the user input devices include:

a disposable, sterilizable, wireless peripheral for use by a surgeon at the surgical site for remote
5 communication with the computer.

9. The image guided surgery system as set forth in claim 1 wherein the digital medium includes:

a preprogrammed one-time-use application specific software module to be used in surgery; and

5 a preprogrammed software module describing the surgical tools, implants, and other accessories.

10. The image guided surgery system as set forth in claim 1 wherein the digital medium includes:

5 preprogrammed software describing dimensional specifications of each of the tools, probes, guides, and any other instrumented accessories contained in the kit.

11. The image guided surgery system as set forth in claim 1 wherein the digital medium includes:

5 preprogrammed software with 3D virtual representations, images, or information of instrumented tools, accessories, implants, and any associated hardware contained in the kits used to create 3D virtual representations of the surgical tools in the images on the display.

12. The image guided surgery system as set forth in claim 1, the digital medium includes:

5 preprogrammed software for superimposing instrumented tools, accessories, implants, and associated hardware on the images in a wireframe or a user selected custom format.